Outgoing
C025005
#3799
R

State of Utah
DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

GARY R. HERBERT
Governor

GREGORY S. BELL
Lieutenant Governor

May 3, 2011

Kirk Nicholes
Alton Coal Development, LLC
463 North 100 West, Suite 1
Cedar City, Utah 84720

Subject: Drainage Control Adjustments, Alton Coal Development, LLC, Coal Hollow, C/025/005, Task ID #3799, Outgoing File

Dear Mr. Nicholes:

The Division has reviewed the drainage control plan that was provided in response to NOV 10078 & 10079. The Division has determined that there are some deficiencies that must be addressed before a determination can be made that the requirements of the R645 Coal Mining Rules have been met, and an approval can be granted. Those deficiencies are listed as an attachment to this letter.

The plans as submitted are denied. Please resubmit the entire application by no later than June 17, 2011.

Sincerely,

Daron R. Haddock

Daron R. Haddock
Coal Program Manager

DRH/PWB/sqs
Enclosure
cc: Price Field Office
O:\025005.COL\WG3799\DEF3799.doc

1594 West North Temple, Suite 1210, PO Box 145801, Salt Lake City, UT 84114 -5801
telephone (801) 538-5340 • facsimile (801) 359-3940 • TTY (801) 538-7458 • *www.ogm.utah.gov*

UTAH DNR OIL, GAS & MINING

Deficiency List

Task No. 3799

Task Name Drainage Control Adjustments

The members of the review team include the following individuals:

April Abate

Diversion Ditch 4 (DD-4)

[R645-301.742.311]: The Permittee was required to submit the following pertaining to the construction or lack of DD-4:

- Submit a corrective action plan for the existing sediment controls and a plan to extend sediment and drainage controls along the northwestern permit boundary that parallels Lower Robinson Creek.

The Permittee responded that a temporary ditch was constructed meeting the same design criteria of the "permanent diversion ditch 4". The Permittee has agreed to update the narrative of the MRP - Section 732.300 to include a discussion on all temporary diversion ditches that are currently in place. The Permittee has agreed to continually relocate and adjust the grade on these ditches when needed. *The design of this ditch meets the design criteria for the 100-year, 6-hour storm, which is more than adequate since the rules require that temporary ditches are required to meet a 2-year, 6-hour design storm standard. Please add all temporary diversion ditches to Map 5-3 with a footnote indicating ditch configurations are subject to change based on mining activity.*

Diversion Ditch 2 (DD-2)

[R645-301.742.311]: During the April 5, 2011 inspection, DOGM personnel and the Permittee examined DD-2 to identify the appropriate segment of the ditch that incorrectly routes undisturbed drainage to Sediment Pond 2. The consensus reached was that DD-2 needs to be reclaimed from where it crosses under the haul road to the topsoil stockpile #2 upstream to its origin. The reclaimed portion of DD-2 will route undisturbed drainage to Lower Robinson Creek. *The Permittee needs to amend the MRP to include a narrative that discusses the modification plan for drainage control from the topsoil haul road to sediment pond #2. An update to Map 5-3 is also required showing the reconfigured DD-2.*

Drainage Controls Southwest of Pond 2

[R645-301.742.311]: The Permittee was required to submit the following pertaining to drainage control measures southwest of Sediment Pond 2:

- Submit a plan to implement sediment and drainage controls in the area southwest of Pond 2

The Permittee responded that a diversion ditch has been installed to help manage sediment and drainage from the area downgradient of Pond 2. The Permittee noted that the configuration of this ditch will vary over time as the pits located in the SW1/4 of the SE1/4 of Section 19 T39S R5E would be developed. The regulations require that a permanent ditch designed to divert miscellaneous flows only require design criteria meeting a 10-year, 6-hour storm. Pond 2 is located approximately 3,000 feet northeast of Sediment Pond 3. The Division is concerned that a ditch covering this much distance would not have an effective enough gradient to transmit water over a distance of 3,000 feet.

The Permittee should evaluate and propose a location for an additional sediment pond to address the drainage in the area between Sediment Ponds 2 and 3, or propose a viable equivalent solution to treat the drainage area between the two ponds. The Permittee will have to include information that this pond, like all other impoundments are designed to meet the 100-year, 24-hour storm design criteria. A water management plan for any discharge, will also be required.

Lower Robinson Creek Temporary Diversion Outfall

[R645-301.742.220]: The Permittee was required to submit the following action item pertaining to addressing water impounding in the natural channel of LRC:

- Submit a plan to implement sediment and drainage controls at the outfall of the natural channel of Lower Robinson Creek where it meets the outfall of the temporary diversion ditch for Lower Robinson Creek to prevent sediment and run off from exiting the permit area via Lower Robinson Creek;

The Permittee has submitted a response indicating that a 5 foot earthen berm installed at the outfall of the natural channel would sufficiently contain a volume of water in the natural channel that is the result of direct precipitation in an area devoid of topsoil and vegetation during a 100-year, 24-hour storm event (equivalent to 3.1 inches per year).

The design plan submitted by the Permittee for the earthen berm was based on a 100-year, 24-hour storm event; however, an additional source of water has been reported from springs that originate in the alluvial material within the natural channel that are producing water at an approximate rate of 7.3 gallons per minute.

The MRP does address seepage that was identified in this area; however the seepage was estimated at 0.05 gallons per minute (see page 7-6 Section R645.301.721 of the MRP). The design criteria submitted by the Permittee for the earthen dike did not provide any backup as to how these calculations were derived. Furthermore, the seeps were not

accounted for in the initial characterization of designing this berm. *The Permittee should consider the following options:*

1. *Permitting this outfall under their existing UPDES permit so that discharge from this area may be allowed,*

2. *be pumped and used for dust suppression or,*

3. *build an additional sediment pond between ponds 2 and 3 to handle the flow.*

If the Permittee chooses to design an impoundment, please submit modeling calculations used to arrive at the redesign of the earthen berm. A collection ditch could be placed between Sediment Ponds 2 and 3 for the purposes of diverting water from the ponds in order to better facilitate pond cleanouts. A submitted update to Appendix 5-2 of the MRP will be required to include a design of an appropriately designed impoundment structure in accordance with the R645-743.100 rules relating to impoundments. A water management plan for any discharge will also be required.

Spillways

[R645-301.743.130]: This regulation clearly requires impoundments to be designed with a combination of primary and emergency spillways – two separate structures, or an open channel spillway for all impoundments. *Ponds 1, 1B and 2 will require an additional spillway to be retrofitted such that each of these ponds has a primary and emergency spillway as required by the rule.*

[R645-301.742.224]: Water removal in the pond will be conducted according to "current, prudent, engineering practices…."The MRP does not address any type of water decanting procedure under this regulation on page 7-80 of the MRP. This is likely because there was no anticipated discharging from the ponds. A component of designing the ponds for discharging would be to amend the MRP. *Please adopt a decant protocol such as the following:*

1. *Description of the pump and power supply system*

2. *Include a calculation demonstrating that dewatering at a pumping rate used to dewater the 10-year, 24-hour runoff volume*

3. *Commitment to discharge the decant water into the primary spillway and perform the discharge in accordance with the UPDES permit conditions.*

4. *Provide a drawing and design for a floating decant intake and associated oil skimmers*
5. *Provide a discussion in the narrative to indicate at what elevation will the decant operation cease (for example, one feet above the sediment level)*

6. *Commit to retain all storm water for a minimum of 24 hours to allow time for solids to settle out, or until effluent limitations have been met prior to decanting*

Drainage from Entry Road to the Mine Facilities

[R645-301.442.400]: To address road drainage issues near the mine yard facilities area, the Permittee was required to submit the following action items:

- Sediment and drainage controls need to be put in place along the upper portion of the road leading to the office trailer. The ditch along the western side of the road appeared to have been removed due to snow plowing

The Permittee has committed to maintain roadside ditches in such a manner that will facilitate runoff flowing to sediment impoundments. Regular inspections should check to verify that these road ditches are functional in a storm event. *Deficiency addressed no further action.*

- Submit a plan to implement sediment and drainage controls in the area southwest of Pond 1B (adjacent to the mine entrance);

The Permittee has proposed to treat this area, which they have estimated to be 33,400 square feet with straw bales "just prior to discharge". In accordance with R645-301.731, this plan is not acceptable. Water discharging off the permit area is prohibited unless an outfall can permitted. The Permittee will need to reevaluate this area for a more permanent drainage control structures. Several options were discussed with the Permittee during the April 5th and 6th site visits including:

1. Construction of a sump/ French drain used to collect water.

2. The addition of more cross culverts along the southern portion of the road will reduce the amount of surface area square footage needed to be treated by a French drain/sump structure.
3. Relocating Sediment Pond 1B and realigning the access road so it enters the yard above the pond.

Please resubmit a plan to treat drainage in the area southwest of Pond 1B.

Additional Road Construction

[R645-534.100]: If an additional road is constructed leading to Sediment Pond 3, the road shall be designed in accordance with the R645-534 regulations for roads and updates to the Facilities and Structures Map 5-3 will be required and in compliance with R645.301.742.410 regulations.

Please submit a plan to design a road to access Sediment Pond 3 and its associated ditch.

Siltation Structures: Sedimentation Ponds

[R645-301.733.100]: *Since seepage and excessive storm activity have been factors at this site, the Permittee needs a qualified hydrologist to reevaluate the design criteria of all sediment ponds to account for excess groundwater that is being encountered at the site. Any redesign or additional sediment ponds proposed at the site should be performed by a qualified consultant in hydrologic design.*

Language in the MRP currently states that the ponds are designed for total containment. If the Permittee opts to discharge from the pond which is permissible under the Coal Hollow UPDES Permit, the language in the MRP will require updating. One option discussed during the April 5, 2011 inspection was permitting the area of the ephemeral channel where NOV #N10078 occurred to include it in the disturbed area boundary. Currently as the plan is laid out, this area will come within 25 feet of the toe of the spoils pile. This channel serves as a small tributary to LRC and does not report any water to the main LRC channel. *This location should be evaluated as an additional sediment pond.*

The MRP currently provides estimates of groundwater in-flow rates under Table 7-9. *Given the unanticipated amounts of groundwater that have been seeping into the pits and the open channels in the permit area, these estimates should be revisited by a qualified hydrologist and updates to Table 7-9 should be made.*